

148112

Page 1

N900040100

Setup Start *NS1*

Stop ***NS2***

Customer:

6

6

Run Start *NR1*

Stop ***NR2***

NR2

[illegible]

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
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Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																	
Description Work Order Deviation			Disposition																		
			Completed By																		
			Lead hand / Supervisor Approval Verification																		
			QC / QA Coordinator Approval																		
Root Cause		FAULT CATEGORY																			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																
OTHER : _____																					

Work Order ID 148112

Friday, June 24, 2016 1:09:37 PM

148112

Page 2

Item ID: D5159-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Rib

Start Date: 7/6/2016 Start Qty: 6.00

6

Cust Item ID:

Required Date: 7/11/2016 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

140

QC8- Inspect parts - second check

0.00

140

QC

Memo

0.02

Quality Control

6 0 44 16-08-23
9-89

150

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3

0.00

150

Powdercoat

Memo

0.01

Powder Coating

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

12:30pm
320°C
1:00pm

16-08-24

160

QC3- Inspect Part Finish

0.00

160

QC

Memo

0.01

Quality Control

38 9-89
AUG 24 2016

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____			
Description Work Order Deviation				Disposition							
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐									
		OTHER : ☐									

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AUG 26 2016

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**WORK ORDER NON-CONFORMANCE / UPDATE**

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Work Order update only ☐

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Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
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OTHER : _____					

Picklist Print

Page 1

Friday, June 24, 2016 1:09:37 PM

Work Order ID: 148112

148112

Parent Item: D5159-1

D5159-1

Parent Item Name: Rib

Start Date: 7/6/2016

Required Date: 7/11/2016

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP REV:A 14.10.03 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304TS0.750W.049		Purchased			No		f	675.1600		7.752632			
M304TS0 750W 049									**			16-08-18	DAS 32 9-89
304 SQ Tube .75x.75x.049W													

Location

Loc Qty

Loc Code

WA004

675.159968

M134172

18.056

M134506

20.05

M134526

60.834

M134680

80

M134825

4.219968

M134940

492

9.9281

DQA: _____ Date: _____

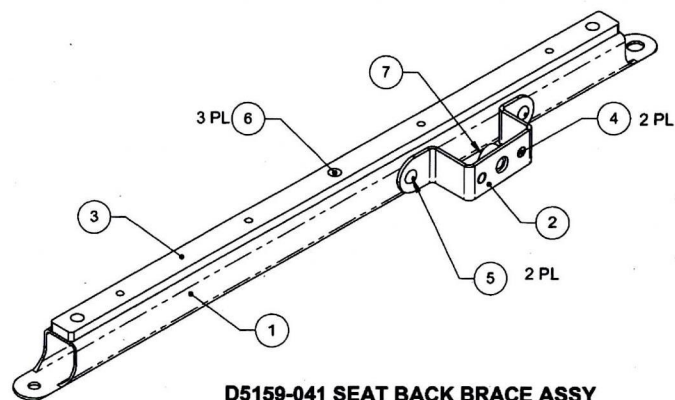
**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

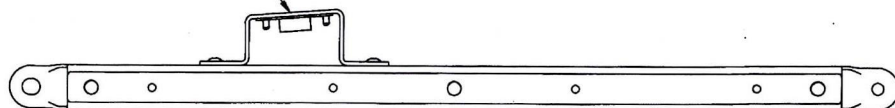
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td style="border: none;"></td> </tr> </table>								Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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OTHER :																											

ITEM	QTY	P/N	DESCRIPTION
	X	D5159-041	SEAT BACK BRACE ASSY
1	1	D5159-1	RIB
2	1	D5160-1	SEAT BRACE BRACKET
3	1	D5160-5	SHIM
4	2	MS20426AD3-4	RIVET, SOLID, CSK
5	2	MS20600M4W3	RIVET, BLIND (MONEL)
6	3	MS20601M4W4	RIVET, BLIND, CSK (MONEL)
7	1	MS21059L4	NUTPLATE



D5159-041 SEAT BACK BRACE ASSY

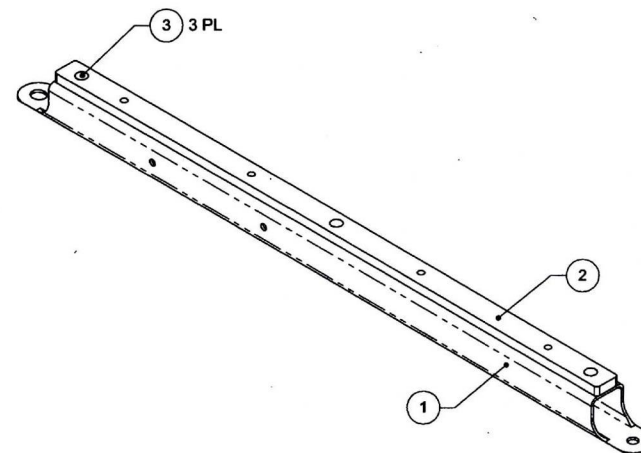
NOTE BRACKET
ANGLE



NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D5159-041" AND BATCH NUMBER BXXXXX PER QSI 044, 6.1.
- 7) WEIGHT: 0.89 lbs

ITEM	QTY	P/N	DESCRIPTION
	X	D5159-043	SEAT BACK BRACE ASSY
1	1	D5159-1	RIB
2	1	D5160-5	SHIM
3	3	MS20601M4W4	RIVET, BLIND, CSK (MONEL)



D5159-043 SEAT BACK BRACE ASSY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D5159-043" AND BATCH NUMBER BXXXXX PER QSI 044, 6.1.
- 7) WEIGHT: 0.82 lbs

RELEASED

2015 FEB 04

ECN 15-322 4

APPROVED

A	NEW ISSUE	AJS	14.09.24
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS		
DRAWN	AJS		
CHECKED	AP		
MFG. APPR.	DD		
APPROVED	HS		
DE APPR.	DS		
DATE	14.09.24		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

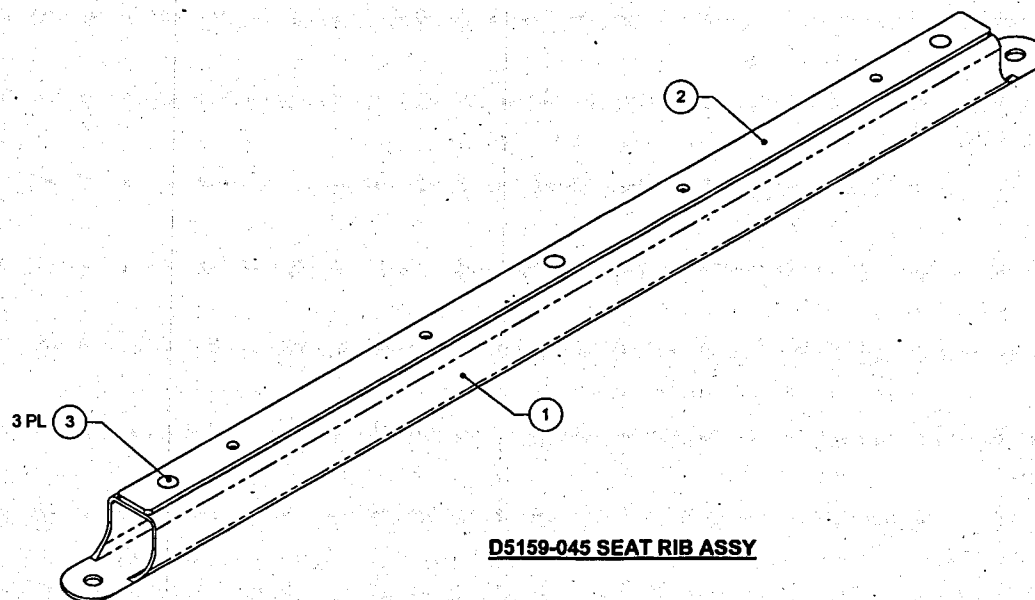
DRAWING NO.
D5159
REV. A
SHEET 1 OF 3
SCALE
NTS

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w/o 148112

2m 16/06/24

ITEM	QTY	P/N	DESCRIPTION
	X	D5159-045	SEAT RIB ASSY
1	1	D5159-3	SEAT RIB
2	1	D5160-3	SHIM
3	3	MS20601M4W4	RIVET, BLIND, CSK (MONEL)



D5159-045 SEAT RIB ASSY

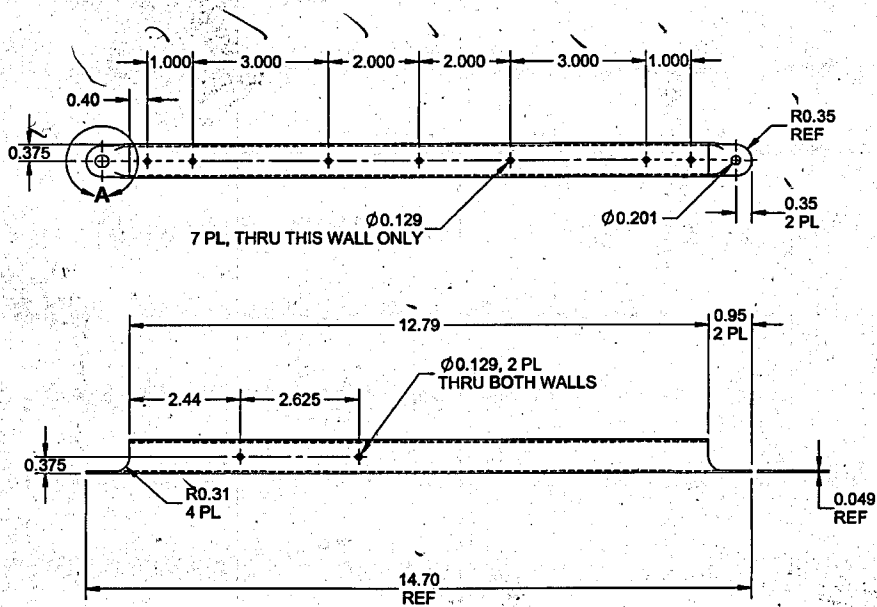
RELEASED
2015 FEB 04 *or*

NOTES:

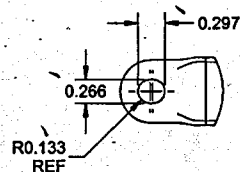
- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D5159-045" AND BATCH NUMBER BXXXXX
PER QSI 044, 6.1.
- 7) WEIGHT: 0.62 lbs

APPROVED

DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	AP	DRAWING NO.	REV. A
MFG. APPR.	DD	D5159	SHEET 2 OF 3
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	SEAT BRACE ASSY	NTS
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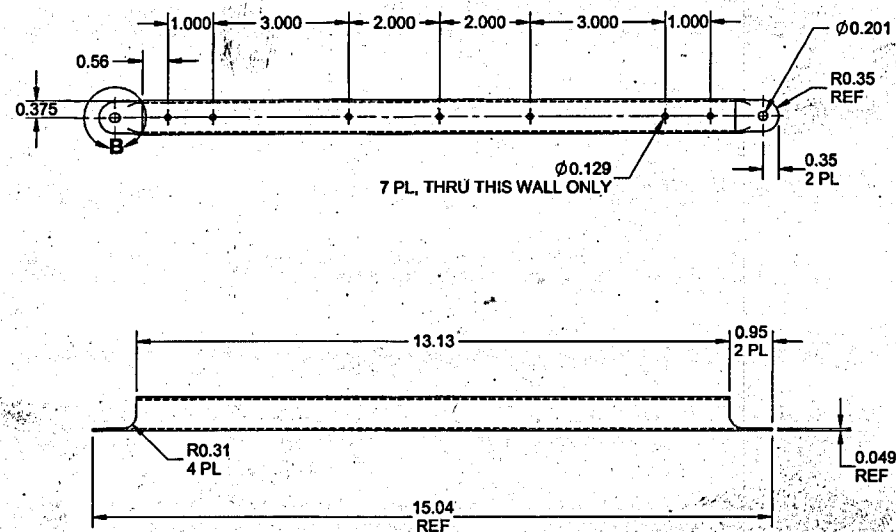
D5159-1 RIB



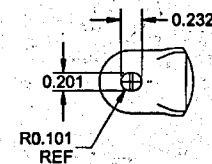
DETAIL A
SCALE 2X

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SQUARE TUBE, 0.75 X 0.75 X 0.049 WALL
PER ASTM A554/A269 MILL FINISH
REF DART SPEC. M304TS0.750W.049
- 2) FINISH: POWDER COAT GREY SANDING (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT -1: 0.49 lbs
-3: 0.50 lbs



D5159-3 SEAT RIB



DETAIL B
SCALE 2X

RELEASED

2015 FEB 04

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DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	AP	DRAWING NO.	REV. A
MFG. APPR.	DD	D5159	SHEET 3 OF 3
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	SEAT BRACE ASSY	NTS
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